

REMARKS/ARGUMENTS

Claims 1-10, 12, 22, 25-26, and 29 are cancelled.

The specification has been amended to include a Brief Description of the Drawings section.

Support the specification amendment, and for each amended claim, is found at the originally filed claims and throughout the originally filed specification, including the originally filed drawings.

No new matter is believed to have been added by the specification and claim amendments.

The objection to the specification is believed to be obviated by amendment of the specification to include a Brief Description of the Drawings section.

The indefiniteness rejection of Claims 11-29 is believed to be obviated by the following:

1) amendment of Claim 11 to replace passive steps with active steps (e.g., replacing distillation with distilling; replacing reaction with reacting);

2) amendment of Claims 15 and 20 to specify that the oxirane is for example, either the crude oxirane or the purified oxirane, as appropriate;

3) amendment of Claims 19 and 23, with addition of the term “a titanium containing silicalite TS-1”;

4) by amending Claim 27 to include structural cooperative elements; and

5) by canceling Claim 29.

Additionally, Applicants note that at page 10, lines 10-20 of the originally filed specification, that the dividing wall column “can comprise at least two physically separate columns which then have to be thermally coupled with one another.” Thus, Applicants

believe, for example, the amendment of, for example, present Claim 11 “wherein the dividing wall column is configured as thermally coupled columns,” is definite.

Withdrawal of the indefiniteness rejection is respectfully requested.

The obviousness-type double patenting rejection of Claims 11-29 as being unpatentable in view of Claims 1-17 of US 7,332,634 (‘634) is respectfully traversed. Claims 1 and 12 of ‘634 describe, in part, that the 1,2-propylene glycol “is taken off as an intermediate boiler” from the dividing wall column. Page 17 of the present specification, referred to by the Office at page 4 of the Official Action, describes, at lines 4-5, that the high boiling components contain propylene glycol. Thus, for purifying 1,2-propylene glycol in the process of, for example, present Claims 11 and 20, and the claims depending therefrom, the 1,2-propylene glycol would be taken off as a high boiling fraction; whereas for purifying 1,2-propylene glycol in the processes of Claims 1 and 12 of ‘634, the 1,2-propylene glycol would be taken off as the intermediate fraction (e.g., intermediate boiler). The claims are thus patentably distinct, because for example, Claims 1 and 12 of ‘634 “teach away from” a feature of the process of, for example, present Claims 11 and 20, and the claims depending therefrom. Indeed, if significant amounts of 1,2-propylene glycol were taken off along with the purified oxirane from the intermediate fraction, purified oxirane would not be taken off at a side intake, as required by the claims. Withdrawal of the rejection is respectfully requested.

The obviousness-type double patenting rejection of Claims 11-29 as being unpatentable over Claims 1-15 of US 6,479,680 (‘680) in view of Rust is respectfully traversed because ‘680 and Rust, either alone or in combination, do not describe or suggest all of the features of, for example, present Claims 11 and 20, and the claims depending

therefrom. Present Claims 11 and 20 have, as a feature, “wherein the dividing wall column is configured as thermally coupled columns.” Applicants submit this feature is not described or suggested by Claims 1-15 of ‘680 in combination with Rust. Withdrawal of the rejection is requested.

The obviousness-type double patenting rejection of Claims 11-29 as being unpatentable over Claims 1-15 of ‘634 and Claims 1-15 of ‘680 is respectfully traversed. As described above, ‘634 does not describe or suggest all of the features of the present claims, and in fact, teaches away from a feature of, for example, present Claims 11 and 20. ‘680 does not cure the deficiency of ‘634. Withdrawal of the rejection is requested.

The obviousness rejection of Claims 11-29 as being unpatentable in view of WO00/07965 (‘965) in view of Rust is respectfully traversed because the references, either alone or in combination, do not describe or suggest all of the features of, for example, present Claims 11 and 20, and the claims depending therefrom, and on the grounds of superior and unexpected results.

Applicants submit that neither ‘965 or Rust, alone or in combination, describe or suggest, for example, the feature of present Claims 11 and 20, and the claims depending therefrom, “wherein the dividing wall column is configured as thermally coupled columns.” On this basis alone, withdrawal of the obviousness rejection is requested.

Additionally, the present specification describes superior results of the presently claimed inventive embodiments including an improved separation, and for example, that the thermally coupled columns can be operated at different pressures which allows for improved adjustment of the temperature levels used for distillation (see, for example, paragraphs 21 and 56 of the originally filed specification). Also, Table at page 12 of the originally specification

describes for example, the superior result of energy saving. Applicants submit the above described superior results are not described or suggested by '965 or Rust, either alone or in combination, and are therefore unexpected results based on the disclosures of these references. Withdrawal of the obviousness rejection is requested.

Applicants submit the present application is now in condition for allowance. Early notification to this effect is earnestly solicited.

Respectfully submitted,

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